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MODULE III - HAZARDOUS WASTE MANAGEMENT TANKS

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III.A. APPLICABILITY

The Conditions of this module apply to the tank systems identified in Condition III.B.

III.B. TANK SYSTEM IDENTIFICATION

The permitted tank systems, including ancillary equipment such as pumps, piping, and mixers, associated with the Lewisite Neutralization System (LNSC) shall be:

III.B.1. Neutralized Product Storage Tank System (T-130)

III.B.2. Decontamination Fluid Tank System (T-140)

III.B.3. Reactor Vessel System (PV-110)

III.B.4. Catalytic Reactor System (PV-120)

III.B.5. Vent Gas Knockout Drum System (PV-130)

III.B.6. Effluent Storage Tank (EF-1)

III.C. WASTE CODE LISTINGS

III.C.1. The Permittee may store or treat chemical warfare agent L(P999), D001, D002, D004, D005, D006, D007, D008, D009, D010, D011, and F999, as defined in R315-2-10(d), wastes in the tanks identified in Condition III.B.

III.C.2. The Permittee shall be prohibited from storing or treating any waste codes not identified in Condition III.C.1.

III.D. WASTE MANAGEMENT

The Permittee shall comply with the requirements of Attachment 2, Waste Analysis Plan.

III.E. TANK SYSTEM DESIGN AND CONSTRUCTION CERTIFICATION

III.E.1. The Permittee shall comply with the tank system design requirements found in R315-8-10 (40 CFR 264.192 incorporated by reference).

III.E.2. The Permittee shall comply with the tank system fabrication requirements found in R315-8-10 (40 CFR 264.192 incorporated by reference).

III.E.3. The Permittee shall comply with the tank system construction or installation requirements found in R315-8-10 (40 CFR 264.192 incorporated by reference).

III.E.4. The Permittee shall comply with the tank containment and leak detection requirements found in R315-8-10 (40 CFR 264.193 incorporated by reference).

III.F. MODIFICATIONS

III.F.1. The physical configuration Lewisite Neutralization System (LNSC) shall be modified in accordance with R315-3-15 and R315-3-17.

III.F.2. New tank systems shall be added to the Lewisite Neutralization System (LNSC) in accordance with permit modification requirements found in R315-3-15 and R315-3-17.

III.G. TANK SYSTEM DESCRIPTIONS

III.G.1. Neutralized Product Storage Tank System (T-130)

III.G.1.a. This tank shall be located in a Category A area as shown on Drawing D-96116-M-001, Attachment 1.

III.G.1.b. Tank T-130 shall be constructed in accordance with Drawing DS-96116-M-106-1 (Rev. D, 12/96), Specification SP-96116-M-106 (Rev. B, 9/19/96), and Equipment Data Sheet DS-96116-M-106-1. These design specifications are found in Attachment 1, System Design.

III.G.1.c. Tank T-130 shall be permitted to store a maximum of 1267 gallons of process effluent. Process effluent may be reintroduced into Step 3 of the Lewisite Neutralization System (LNSC) process.

III.G.2. Decontamination Fluid Tank System (T-140)

III.G.2.a. This tank shall be located in a Category A area as shown on Drawing D-96116-M-001, Attachment 1.

III.G.2.b. Tank T-140 shall be constructed in accordance with Drawing DS-96116-M-106-2 (Rev. D, 12/96), Specification SP-96116-M-106 (Rev. B, 9/19/96), and Equipment Data Sheet DS-96116-M-106-2. These design specifications are found in Attachment 1, System Design.

III.G.2.c. Tank T-140 shall be permitted to store and treat a maximum of 928 gallons of spent decontamination fluid from PPE decontamination, ton container washdown, ton container rinsate, etc.

III.G.2.d Spent decontamination fluid stored in tank T-140 may be introduced into Step 1 of the treatment process.

III.G.3. Vent Gas Knockout Drum System (PV-130)

III.G.3.a. This tank shall be located in a Category A area as shown on Drawing D-96116-M-001, Attachment 1.

III.G.3.b. Tank PV-130 shall be constructed in accordance with Drawing DS-96116-M-107-3-1 (Rev. D, 12/96), Specification SP-96116-M-107 (Rev. D, 9/26/96), and Equipment Data Sheet DS-96116-M-107-3-1. These design specifications are found in Attachment 1, System Design.

III.G.3.c. Tank PV-130 shall be permitted to store a maximum of 60 gallons of condensate from the exhaust gas stream of the Lewisite Neutralization System (LNSC).

III.G.3.d. The condensate shall be reintroduced into the treatment process.

III.G.4. Reactor Tank (PV-110)

III.G.4.a This tank shall be located in a Category A area as shown on Drawing D-96116-M-001, Attachment 1.

III.G.4.b Tank PV-110 shall be constructed in accordance with Drawing DS-96116-M-107-1-1&2 (Rev. D, 12/96), Specification SP-96116-M-107 (Rev. D, 9/26/96), and Equipment Data Sheet DS-96116-M-107-1-1&2. These design specifications are found in Attachment 1, System Design.

III.G.4.c Tank PV-110 shall be permitted to store and treat Step I, II, and III process fluids. The maximum waste in the tank shall not exceed 1000 gallons.

III.G.4.d. The process fluids treated and stored in this tank shall be managed as Hazardous waste.

III.G.5. Catalytic Reactor Tank (PV120)

III.G.5.a. This tank shall be located in a Category A area as shown on Drawing D-96116-M-001, Attachment 1.

III.G.5.b. Tank PV-120 shall be constructed in accordance with Drawing DS-96116-M-107-2-1&2 (Rev. D, 12/96), Specification SP-96116-M-107 (Rev. D, 9/26/96), and Equipment Data Sheet DS-96116-M-107-2-1&2. These design specifications are found in Attachment 1, System Design.

III.G.5.c Tank PV-120 shall be permitted to store and treat Step II process fluid.

III.G.5.d. The process fluids from Step II which are stored and treated in this tank shall be managed as hazardous waste.

III.G.6. Effluent Storage Tank (EF-1)

III.G.6.a. This tank shall be located in the Solid Waste Storage Area (SWSA) of the General Purpose Facility (GPF) and shown on Drawing TCDS-SK89-004, Attachment 1.

III.G.6.b. Tank EF-1 shall be operated and constructed in accordance with Equipment Plan Number DAAC89-97-D-001 with attached drawings. This equipment Plan and Drawings are found in Attachment 1, System Design.

III.G.6.c. Tank EF-1 shall be permitted to store a maximum of 5,500 gallons of process effluent. Tank EF-1 will store neutralization process effluent received from Tank T-130. These liquids will be stored in EF-1 until they can be transported to an off-site TSDF for stabilization and disposal.

III.G.6.d. Tank EF-1 shall have a separate secondary containment system with a capacity not less than 6,500 gallons.

III.H. TANK OPERATING REQUIREMENTS

III.H.1. The Permittee shall be permitted to manage Lewisite Neutralization System (LNSC) process wastes in the tanks identified in Condition III.B.

III.H.2. The Permittee shall be prohibited from managing the waste streams identified in Condition III.C. in any tank not specified in Condition III.B.

III.H.3. Neutralized material (F999) shall be managed as a waste derived from a acutely hazardous waste (P999).

III.H.4. Managing a regulated waste in an unpermitted tank shall be a violation of this Research, Development, and Demonstration Permit.

III.H.5. The Permittee shall not place hazardous wastes or treatment reagents in the tank system if they could cause the tank, its ancillary equipment, or a containment system to rupture, leak, corrode, or otherwise fail.

III.H.6. The Permittee shall use appropriate controls and practices to prevent spills and overflows from the tank or containment systems.

III.H.7. The Permittee shall protect tanks from accelerated corrosion, as required by R315-8-10 [40 CFR 264.192(f) incorporated by reference].

III.H.8. The Permittee shall maintain secondary containment for 1330 gallon capacity in the Category A area within the Auxiliary Test Facility (ATF). Secondary containment capacity shall not be used for daily or routine storage of waste.

III.H.9. The Permittee shall comply with R315-8-10 (40 CFR 264.194 incorporated by reference).

III.H.10. The reaction solution shall not be transferred for stabilization until it has been treated to a level where the Lewisite agent concentration is at or below 1 ppm.

III.H.11. The Decontamination Fluid Tank T-140 shall be permitted for storage and treatment of decontamination solutions from the treatment process, the decontamination of personnel, the decontamination of operations areas, and the wash water from rinsing drained ton containers.

III.H.12. Decontamination solutions stored or treated in Tank T-140 shall be managed as a hazardous waste.

III.H.13. Decontamination solutions may be reintroduced into the neutralization system.

III.H.14. Decontamination solutions not introduced into the neutralization system shall be managed as a hazardous waste.

III.H.15. Decontamination solutions from the Lewisite Neutralization System (LNSC) process shall not be treated in the Brine Dryers located at the CAMDS Facility.

III.H.16. Waste decontamination solution shall be pumped from the waste collection system into Tank T-140.

III.H.17. Decontamination solutions in Tank T-140 shall be analyzed to establish NaOH concentration prior to each introduction into the neutralization process. The NaOH concentration in the solution will be recorded in the operating record.

III.H.18. Decontamination solutions from T-140 may only be introduced into the neutralization process at Step I.

III.I. TANK PROVISIONS FOR IGNITABLE OR REACTIVE WASTES

The Permittee shall comply with R315-3-6.2 (40 CFR 270.16 incorporated by reference), R315-8-2.8, and R315-8-10 (40 CFR 264.198 incorporated by reference).

III.J. TANK PROVISIONS FOR INCOMPATIBLE WASTES

The Permittee shall comply with R315-3-6.2 (40 CFR 270.16 incorporated by reference), R315-8-2.8, and R315-8-10 (40 CFR 264.199 incorporated by reference).

III.K. RESPONSE TO LEAKS OR SPILLS

III.K.1. The Permittee shall comply with R315-8-10 (40 CFR 264.196(a) through 264.196(c) incorporated by reference).

III.K.2. For reporting of spills, the Permittee shall comply with Conditions III.N.

III.K.3. The Permittee shall comply with R315-8-10 (40 CFR 264.196(e) and 264.196(f) incorporated by reference).

III.K.4. The Permittee shall partially close a tank system or tank system component in accordance with Condition III.O.1. or close the system in accordance with Condition III.O.6.

III.K.5. If the Permittee replaces a component of the tank system to eliminate the leak, that component must satisfy the requirements for new tank systems in accordance with R315-8-10 (40 CFR 264.192 incorporated by reference).

III.L. INSPECTION SCHEDULES

III.L.1. The Permittee shall comply with R315-8-2.6 and R315-8-10 (40 CFR 264.195 incorporated by reference).

III.L.2. The Permittee shall conduct inspections of the tank systems and components of the Lewisite Neutralization System (LNSC) once each operating day in accordance with Table III.L.1., *LNSC Inspection Schedule*.

Table III.L.1.		
LNSC INSPECTION SCHEDULE		
LNSC Tanks (T-130, T-140, PV-110, PV-120, PV-130, EF-1, and ancillary equipment)		
Item	**Frequency**	**Inspection Description**
Tank Area	Daily	Visually inspect for evidence of leakage, cracks, excessive chips or gouges that would allow seepage into construction materials or ground.
Piping and Valves	Daily	Visually inspect for evidence of corrosion and leakage.
Tank Structure	Daily	Visually inspect for evidence of corrosion, erosion, leaking seams or fixtures.
Pumps	Daily	Visually inspect connections for evidence of obvious mechanical failure or leaks. Check for excessive noise or vibration.
Tank Supports	Daily	Visually inspect for evidence of corrosion.
Secondary Containment System	Daily	Visually inspect for evidence of cracks, erosion of construction materials or other physical damage.
Level Sensors	Daily	Check for proper operation at monitor panel in CMO.
Overfill/Spill Control Equipment	Daily	Visually inspect for evidence of corrosion, leakage or other physical damage.
Monitoring Equipment	Daily	Check for operation within normal ranges.

III.L.3. These items will be inspected by direct observation, remote camera, or electronic sensors.

III.L.4. If a tank system or component is found to be leaking or unfit for use as a result of the integrity examination or assessment, the Permittee shall comply with Condition III.K. and notify the Executive Secretary, in accordance with Condition III.N.

III.L.5. The Permittee shall comply with R315-8-10 (40 CFR 264.195(d) incorporated by reference).

III.M. RECORD KEEPING

III.M.1. The Permittee shall comply with R315-3-10(j) and R315-8-5.8.

III.M.2. The Permittee shall keep on file at CAMDS a record of all tank system inspections conducted on the Lewisite Neutralization System (LNSC) tanks.

III.M.3. For all new or repaired tanks, the Permittee shall obtain, and keep on file at CAMDS, the written statements by those persons required to certify the design and installation of the tank system. The certification and installation inspection shall be conducted in accordance with Condition III.E.

III.M.4. The Permittee shall keep on file at CAMDS the written tank system assessment.

III.M.5. The Permittee shall maintain on file at CAMDS a record of the results of tank integrity tests conducted.

III.N. REPORTING

III.N.1. The Permittee shall comply with R315-3-8(b), R315-3-10(l), and R315-8-10 (40 CFR 264.196(d)(1) and 264.196(d)(3)).

III.N.2. The Permittee shall orally report to the Executive Secretary, within twenty-four (24) hours of detection, when a release of agent occurs to the environment from a tank system or secondary containment system in accordance with R315-8-10 (40 CFR 264.196(d)(1)).

III.N.3. Within thirty (30) calendar days of detecting a release of agent to the environment the Permittee shall submit a detailed report of the incident to the Executive Secretary in accordance with R315-8-10 (40 CFR 264.196(d)(3) incorporated by reference).

III.N.4. The Permittee shall report to the Executive Secretary any failures of any Lewisite Neutralization System (LNSC) tank within seven calendar days of the failure.

III.O. CLOSURE

III.O.1. Partial Closure

III.O.1.a. Upon completion of the Lewisite Neutralization System testing, any permitted tank associated with this testing may be partially closed.

III.O.1.b. The Permittee shall accomplish Partial Closure in accordance with Condition II.L.2.

III.O.2. Rinsing Procedure

III.O.2.a. Each tank shall be thoroughly rinsed with a minimum of three rinses.

III.O.2.b. The first rinse shall be with an appropriate solvent.

III.O.2.c. The last rinse shall be with water.

III.O.2.d. The rinsate shall be either sampled and analyzed to determine it is not a hazardous waste; or shall be managed as a hazardous waste.

III.O.2.e. A wipe sample shall be taken from each of the tanks to determine that the tank material has less than 1 ppm L concentration.

III.O.3. A tank which has been partially closed shall be added to the CAMDS Closure Plan, in accordance with R315-3-15 and R315-3-17.

III.O.4. Upon approval of the Executive Secretary of the partial closure, the tank shall not be used for management of any other material without notification of the Executive Secretary, in accordance with R315-3-15 and R315-3-17.

III.O.5. If partial closure cannot be accomplished, the tank shall be closed in accordance with Conditions II.L.

III.O.6. Final Closure

III.O.6.a. The Permittee shall comply with R315-8-10 (40 CFR 264.197 incorporated by reference).

III.O.6.b. Closure of tanks shall be in accordance with R315-8-10.

III.O.6.c. Tanks shall be managed as a hazardous waste until they are shown to be clean.

III.O.6.d. Tanks shall be thoroughly decontaminated.

III.O.6.e. Tanks shall be removed from the facility.

III.O.6.f. Tanks shall be cut into manageable pieces.

III.O.6.g. Tanks shall be sent for disposal at a permitted hazardous waste landfill.

III.O.6.h. Tanks may only be recycled or managed as scrap metal with prior approval by the Executive Secretary and with the permit modifications required in accordance with R315-3-15 and R315-3-17.